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## **Cultural and socio-economical dimensions of Human Reproduction & Sex Education in the biology textbooks of eight countries.**

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### **Abstract:**

This study was carried out within the European research project “Biology, Health and Environmental Education for Better Citizenship”. We present a comparative analysis of textbooks from eight Mediterranean countries which differ by their cultures, their socio-economical levels and their religions. Our work is focused on the sensitive educational topic “Human Reproduction and Sex Education”. We analyzed 43 biology textbooks among 8 countries: four are in Europe and four in Africa and Middle East.

Grids were built to identify implicit values in the texts and images. We analyzed more precisely the explicit or implicit presence of cultural, socio-economical and ethical dimensions. We investigated whether the authors of textbooks present differently this theme depending on the socio-cultural, ethical and religious contexts. The content of the textbooks was analyzed as reflecting the conceptions of their authors and publishers.

The outcomes of the analyses show that several textbooks present images of human beings restricted to only one ethnic type, usually white-skinned and with fair hair.

The social, cultural, economical and ethical dimensions were generally absent, except for some interest for them in few European textbooks.

**Keywords:** School textbooks - Human Reproduction - Sex Education – France – Italy-Lebanon - Morocco - Portugal - Senegal –Tunisia – Cyprus.

## 1. Introduction

In the present work we analyzed current school textbooks of biology among eight countries with regard to interactions between their contents and some contrasted socio-cultural contexts as different cultures and religions. The general theoretical background of the research is the KVP Model (Clément 2004, 2006) proposing to analyze the conceptions expressed in the textbooks as possible interactions between three poles: K (scientific Knowledge), V (systems of values) and P (social practices).

Our work is focused on two important topics in Biology Education: Human Reproduction and Sex Education (HRSE). We focus in particular on ethnical, cultural, socio-economic and ethical dimensions. We are interested in identifying how the choice of teaching or not some knowledge and how the way they are presented, expressed values that are often implicit, and social practices which are dominant in each country, showing interactions between K, V and P. This analysis concerns a part of the didactic transposition (Chevallard 1985, 1992, Clément 2004, 2006) to better understand how the choice of teaching content in the textbooks is done.

Sex education is a very delicate topic in several countries, where scientific and medical aspects cannot be dissociated from psychological, ethical and socio-economical dimensions (Picod & Guigné 2005, Pelège & Picod 2006).

Few works were done until now from international surveys of curricula and textbooks, before the BIOHEAD-Citizen project<sup>1</sup>. The present work is a complement of the first publications coming from this project, which were concerning other dimensions of human reproduction and sex education in textbooks (e.g. Bernard et al. 2008).

## 2. Methodology

A didactic analysis of textbooks is therefore involved in textbooks contents and taking into account their explicit or implicit messages. The images can be analyzed as significant of the sociocultural context of those countries.

We categorized the images related to human reproduction and sexuality education (HRSE) by identifying the types of persons, specifying their physical and / or cultural features to characterize their ethnic types.

We then quoted the presence or absence, in each textbook, of cultural, socio-economic and/or ethical dimensions related to this topic HRSE, in order to determine the possible influence of the socio-cultural context in each country.

We used here only a part of the grid developed within the Biohead-Citizen project asking:

- Is a socio-cultural approach present or absent?
- Is the teaching of reproduction and human sexuality taking into account the social context? Or is it limited to the biological and medical point of view?
- Is an ethical dimension present or absent?

In this work, 43 textbooks of the 8 different countries were analyzed. Four countries are outside Europe where the sex education is often a problematic issue: three Muslim countries (Tunisia, Morocco and Senegal) and a multi-confessional one (Lebanon). The 4 other countries (Cyprus, France, Italy, Portugal) are from south of Europe and have different

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<sup>1</sup> BIOHEAD-Citizen = “Biology, Health and Environmental Education for Better Citizenship”, CIT2-CT2004-506015, FP6 of European Community.

cultures and religions, mainly Christian (catholic or orthodox, few protestant) and atheist or agnostic.

| Page (pp...) and image number | Number of ethnic types | Criteria used to identify ethnic types | Image of a couple showing an ethnic diversity (tick box) | Image of a family showing an ethnic diversity (tick box) |
|-------------------------------|------------------------|--|--|--|
|                               |                        |  |  |  |
|                               |                        |  |  |  |
| <b>Total</b>                  |                        |  |  |  |

Figure 1 - Grid for the identification of Ethnical approach in images in the chapters related to HRSE

|   | Pages (pp...to pp...) | Contents of the controversy in English |
|---|-----------------------|--|
| Cultural references:<br><a href="#">religion, customs, taboos</a> |                       |  |
| Socio-economic: references:<br><a href="#">economic stakes</a>    |                       |  |
| Ethical references:<br><a href="#">moral position</a>             |                       |  |

Figure 2 - Grid for the identification of Cultural, socio-economic and ethical dimensions in the chapters related to HRSE

All the textbooks were published in the corresponding country except for Senegal, which uses French textbooks.

Most of publisher was private except all in Tunisia and some in Lebanon, published by the educational centers linked directly to the Ministry of Education of those countries.

All publishers in Morocco are independent of the state but need a specification set by the Ministry of Education: only textbooks reviewed and accepted by a committee of experts may be published. In Lebanon, all private books must be approved by the CRDP P (Centre for Development and Educational Research).

Human reproduction is treated at different level of study in all countries except in Senegal where it is treated at only one level, the ninth year.

### 3. Results

#### 3.1- Ethnical approach:

| countries                              | Portugal | France                                  | Italy                         | Cyprus               | Morocco                       | Tunisia       | Senegal       | Lebanon       | Total |
|--|----------|---|-------------------------------|----------------------|-------------------------------|---------------|---------------|---------------|-------|
| Number of textbook                     | 6        | 10                                      | 8                             | 2                    | 5                             | 5             | 1             | 6             | 43    |
| Number of images                       | 0        | 18                                      | 28                            | 3                    | 9                             | 11            | 3             | 2             | 74    |
| Number of ethnic types (1 person)      | 0        | 1                                       | 1                             | 1                    | 1                             | 1             | 1             | 1             |       |
| Number of ethnic types (many persons)  |          | 8                                       | 2/3/9                         |                      | 8                             | 1             |               | 8             |       |
| Criteria used to identify ethnic types |          | Color of skin & hair, shape of the face | Color of skin & hair, dresses | Color of skin & hair | Color of skin & hair, dresses | Color of skin | Color of skin | Color of skin |       |

Figure 4: Identification of ethnical types in images in the chapters related to HRSE in each country

This approach noticed the number of occurrences of specific physical and/or cultural criteria used to identify ethnic types.

In the 43 textbooks, we found 74 images (28 in the Italian textbooks and 18 in French textbooks). We used mainly the following criteria to identify ethnic type: physical aspect (skin and hair color or/and face features) and dresses.

Our study shows clearly that the majority of illustrations in textbooks contain persons belonging to only one ethnic type, usually characterized by the color of skin and of hair: Archetype of European persons, with white skin and light hair.... Moreover, this color is dominant over black and brown. It seems that in some countries the black color of the skin is associated with disease, malnutrition and drama (for example in Tunisian, Senegalese and Italian textbooks, Figure 5)

The illustrations showing many persons with ethnic diversity are rare, and exist only in Italian, French, Moroccan and Lebanese textbooks. We also observed the complete absence of images of a couple or a family showing an ethnic diversity.

### 3.2. Cultural, socio-economical and ethical dimensions

| Countries | Cultural references | Socio-economical references | Ethical references |
|-----------|---------------------|-----------------------------|--------------------|
| Portugal  | 0                   | 1                           | 2                  |
| France    | 0                   | 0                           | 0                  |
| Italy     | 1                   | 0                           | 1 (2 sentences)    |
| Cyprus    | 0                   | 0                           | 0                  |
| Morocco   | 2                   | 1                           | 1                  |
| Tunisia   | 1                   | 1 ( 3 sentences)            | 0                  |
| Senegal   | 0                   | 1                           | 1                  |
| Lebanon   | 2                   | 2                           | 2 (3 sentences)    |
| Total     | 6 Textbooks         | 6 Textbooks                 | 7 Textbooks        |

Figure 6: Table for the identification of cultural, socio-economic and ethical dimensions in the chapters related to HRSE in each country

| Countries | Cultural references         | Socio-economical references | Ethical references         |
|-----------|-----------------------------|-----------------------------|----------------------------|
| Portugal  | X                           | 18-19 years                 | 11-12 years<br>18-19 years |
| France    | X                           | X                           | X                          |
| Italy     | 14-18years                  | X                           | 14-18 years<br>14-18 years |
| Cyprus    | X                           | X                           | X                          |
| Morocco   | 14-15 years<br>17- 18 years | 17- 18 years                | 17- 18 years               |
| Tunisia   | 17-18 years                 | 17-18 years                 | X                          |
| Senegal   | X                           | 14 – 15 years               | 14 – 15 years              |
| Lebanon   | 16 years<br>14 ears         | 16 years<br>17 years        | 16 ears<br>17 years        |

Figure 7: Table for the identification of the level and age of cultural, socio-economic and ethical dimensions in the chapters related to HRSE per each country

In the 12 textbooks of France and Cyprus, there is a total absence of such dimensions. In the other countries, there are only some ones.

### **3.2.1. Cultural references: religion, customs, taboos.**

The cultural dimension is present in only 6 textbooks (Italy, Morocco, Tunisia and Lebanon). We observe the total absence of this dimension in four countries textbooks: Portugal, France, Cyprus and Senegal (19 textbooks).

Only one textbook in Italy and one in Tunisia refer to the male circumcision as a religious tradition and a medical practice.

- “Some religious traditions, such as the Islamic and Jewish, make use of the removal of foreskin (circumcision) ... The circumcision is adopted also in case of disease..... (Italy,2001).
- Male circumcision (Muslim religious rite): - The circumcision ritual – circumcision surgery (Tunisia, 2005).

Moroccan textbooks refer to the law of Islam which prohibits illegal sexual intercourse, having several partners, prohibits taking drugs and recommends adopting preventive behaviors against AIDS and STIs. They also advise to avoid prostitution and to use condoms to protect against these diseases.

- *The respect of Islamic laws makes it possible to immunize firmly against the AIDS, as it does not allow having several sexual partners and prohibits the abnormal sexual behaviours....(1996)*
- *“To avoid illegal sexual intercourse”, “To avoid having several sexual partners”, “Avoid prostitution”. (2005).*

One Lebanese textbook refer to religion (monotheistic) to formulate views on abortion and medical assisted reproduction, considering abortion as a murder and asserting that procreation should be the result of normal sexual relation.

- *‘Many religions consider the IVG as an assassination. Procreation should be the result of normal sexual relation, complete and legal. For a religion, the assisted medical procreation is based on patrilineal and matrilineal filiations, for another one it is a form of adoption’ (1999).*

These values correspond to the country dominant religion in those countries: Italy, Morocco, Tunisia and Lebanon.

### **3.2.2. Socio-economical references: economic stakes**

We observed the total absence of this dimension in textbooks from 3 countries (France, Cyprus and Italy, 20 Textbooks).

Moroccan and Lebanese textbooks mentioned brand name of products such as contraceptives: pills and condoms....

In the Tunisian textbooks we noticed some techniques and methods of prenatal diagnosis, pregnancy tests most frequently used and testing for HIV.

The Portuguese textbooks contain the social consequences of demographic development on economic development.

*“For instance, the perspective to Portugal till 2020 is that the country will have, proportionally, more people over 65 years old and fewer children. There will be less active people for each retired person that will bring some social implications” (2005)*

The Senegalese textbook refers to economic condition and how can the teenager prepare his/her sexual life.

- *“Economic condition: the two partners must be able to provide for the material needs of their children... “(1996).*

### **3.2.3. Ethical references: moral position**

We noticed the total absence of this dimension in French, Cyprus and Tunisian textbooks (15 Textbooks).

Some Moroccan, Lebanese, Portuguese, Italian and Senegalese textbooks refer to the religion, moral values, ethical and juridical position about abortion, assisted reproduction, legal status, moral condition in sexual relationship. The religion is also mentioned in Cultural references.

- *“The abortion is an illegal operation in Morocco, allowed only in case the pregnancy presents a risk to the mother’s health and life” (Morocco, 1996)*
- *“Nowadays new perspectives raise doubts about principles and values and even the biological phenomena nature itself, in relation to the assisted reproductive technology“ “ The bioethics committees think about this subjects, once the new techniques and the social modifications from it put in risk the own human identity” (Portugal, 2005).*
- *“Ethical and juridical problems (related to artificial fecundation) are more and more relevant; this makes precise rules necessary as well as a clear definition of the rights of human embryo”. “About medical assisted reproduction: “there is a lot of debate in Italy, some people think that there must be severe rules to limit the application of this techniques, other people think that the State does not have to impose limitations, and that single persons do have to choose according to their ethical convictions” (Italy , 2001).*
- *“Moral condition: the two partners must have a sense of modesty and good morals which enables them to respect the norm of life in society”” To know that a woman wants to be loved as a person and not as an object for the only sexual pleasure of the man... “(Senegal, 1996)*
- *“There are many moral and ethical questions about the use of this technique. .... In fact, these bioethical questions constitute the basis of a debate in order to determine a legal scope for the human intervention in the field of biomedical sciences” (Lebanon, 2002).*

### **3. Conclusion**

The analyzed textbooks support the conception of a majority of images showing a European archetype as a blond person: white skin and light hair. We used these physical criteria to identify ethnic types: skin color and hair. This choice of physical criteria in the images seems to be also linked to socio-cultural context of each country. Indeed, modern societies consider white skin and light hair as aesthetic, especially in North African society.

While a majority of persons are with brown hairs. Even in Senegal, only some images of persons are dark skinned. This dominance of white skinned persons was already found in the trees of human evolution in the textbooks of the same countries (Quessada et al., 2008).

We note a very small interest of such dimensions in some European textbooks for this topic HRSE. It’s could be an indicator that the publishers’ textbooks in these countries don’t convey values through programs by the didactic transposition.

When we found cultural, socio-economical and ethical dimensions it was mainly in the secondary school (students 14- 18 years) in several countries.

Lower differences among countries were found than what was expected, but significant interactions between scientific knowledge (K) and values (V) were be found. The textbooks in Morocco, Tunisia, Lebanon and Italy are examples where promoted values are juxtaposed and



linked with knowledge related to HRSE, they convey different social, moral, religious values. At the opposite, textbooks of France and Cyprus avoid any reference to moral values. Moroccan textbooks use the injunctive style to adopt or avoid some sexual behavior, often with implicit or explicit moral values. Morocco is an example of how social values are didactically transposed into textbooks. Prostitution, adultery and homosexuality are forbidden by Islam and condemned by Moroccan law. Fidelity and abstinence are the preferred sexual practices promoted both by the dominant religion and most textbooks to prevent diseases. Compared with those of other countries, Lebanese textbooks seem to be a pole apart from the fact that despite their predominantly biomedical content, some may offer an example of health education while others convey different moral values. This feature is the result of Lebanese complexity of its society. Some textbooks relate bioethical questions introducing a debate in order to determine a legal scope for the human intervention in the field of biomedical sciences. Some discussions related to controversial bioethical problems are mostly faith-based and / or based on conservative opinions linked to a fundamentalist religion. We conclude that the cultural, socio-economical and ethical dimensions are rare in the analyzed textbooks. They deserve to be more debate, as important socio-scientific issues (Albe & Simonneaux 2002) in the curricula and textbooks. That is a necessary complement of the scientific and medical advances in a human and socially acceptable way.

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